PRODUCT BROCHURE

Innovative Power Quality and Energy Storage solutons

AZeco Power Energy Solutions

AZeco® Power Energy Solutions

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PRESENTAZIONE DELL'AZIENDA

PRESENTAZIONE DELL'AZIENDA

La società Azeco S.r.l. ha selezionato un qualificato partner OEM in Cina, specializzato in soluzioni per la qualità della energia con un polo di ricerca e sviluppo di prodotti elettronici. Collaborando con istituti di eccellenza come l'Accademia di Ingegneria Elettrica e varie università. I principali prodotti sono stati ampiamente utilizzati in diversi settori, tra cui reti elettriche statali, edifici commerciali, trasporti e industria pesante, con oltre 30.000 progetti installati in oltre 85 paesi. Assieme continueremo a considerare l'efficienza energetica una missione costante per raggiungere un mondo a basse emissioni di carbonio e verde, insieme ai nostri clienti partner.

Area della linea di produzione

Area di prova

GLOBALIZZAZIONE

30,000+

Applicated Projects

85+

Export Countries

Cooperare in materia di energia e qualità
dell'energia per risparmiare energia insieme

CATEGORIE DI PRODOTTI

01 POWER QUALITY

Current Solution

SVG
Static Var Generator

AHF
Active Harmonic Filter

Voltage Solution

AVC
Active Voltage Conditioner

DVR
Dynamic Voltage Restorer

02 ACCUMULO DI ENERGIA

ESS Solution

PCS
Power Conversion System

DC-DC/MPPT
DC-DC Converter

STS
Static Transfer Switch

LINEA PRODOTTI

01 SVG Static Var Generator

Tensione nominale	Potenza nominale
0.22kV	3/ 5/ 7/ 10/ 15/ 25/ 35/ 55/ 75kvar
0.4kV	5/ 10/ 15/ 20/ 30/ 50/ 75/ 100/ 150kvar
0.48kV	12/ 20/ 30/ 40/ 60/ 80/ 100/ 120kvar
0.69kV	120kvar
0.8kV	138kvar

02 AHF Active Harmonic Filter

Tens. nominale	Corrente nominale
0.22kV/ 0.4kV	10/ 15/ 20/ 30/ 50/ 75/ 100/ 150/ 200A
0.48kV	15/ 25/ 35/ 50/ 75/ 100/ 120/ 150A
0.69kV	100A
0.8kV	80A

03 AVC Active Voltage Conditioner

Sistema di fase	AVC Potenza	Potenza carico
Single-phase system	10kVA	30-100kVA
	20kVA	65-200kVA
Threee-phase system	30kVA	30-100kVA
	50kVA	170-500kVA
	100kVA	330-1000kVA
	125kVA	400-1250kVA

04 DVR Dynamic Voltage Restorer

Tensione nominale	Potenza nominale
0.22kV	30-500kVA (Other capacities customizable)
0.4kV	
0.48kV	
0.69kV	

05 PCS Power Conversion System

AC Cap. nominale	DC Tens. nominale	Potenza nominale
0.4kV	580V-950V(3P3W) 630V-950V(3P4W)	30/ 60/ 100/ 125kW
0.48kV	700-950V(3P3W) 750-950V(3P4W)	
0.4/0.48kV	48-850V	60kW (Two-stage PCS)

06 DCDC DC-DC Converter

LV Tens. nominale	HVTens. nominale	Pot. nominale
0.48kV-0.9kV	0.2kV-0.95kV	60kW
		100kW

07 STS Static Transfer Switch

Tensione nominale	Potenza nominale
0.22kV/ 0.44kV/ 0.48kV	50kW/ 200kW/ 500kW

CATEGORIA
DEI PRODOTTI

POWER QUALITY

QUALITÀ DELL'ENERGIA

Le apparecchiature per la qualità dell'energia includono dispositivi di corrente come AHF e SVG e dispositivi tensione come DVR - AVC - DVR e AVC. AHF (Active Harmonic Filter) e SVG (Static Var Generator) sono dispositivi fondamentali per la compensazione della qualità dell'alimentazione, progettati per affrontare problematiche chiave come l'inquinamento armonico, la potenza reattiva e lo squilibrio trifase. Sono ampiamente utilizzati in vari scenari complessi di consumo energetico, tra cui produzione industriale, edifici commerciali, integrazione di nuove reti energetiche, data center, ecc., fornendo un'ottimizzazione completa della potenza per i sistemi di alimentazione. DVR

01

Current Solution

- SVG Static Var Generator
- AHF Active Harmonic Filter

02

Voltage Solution

- AVC Active Voltage Conditioner
- DVR Dynamic Voltage Restorer

01

POWER QUALITY

Current Solution

COEPOWER STANDARD SERIES SVG/ AHF

INTRODUCTION

Simultaneously provides harmonic filtering, reactive power compensation, and three-phase imbalance correction functions, the priority of these functions can be flexibly adjusted. The Full response time is less than 10ms, suitable for various load conditions.

ADVANTAGE

- Ultra fast response time
- 16 comprehensive protection functions
- Compact dimension
- Easy to install

Static Var Generator -0.22kV/0.4kV					
Rated Capacity at 0.22kV	15kvar	25kvar	35kvar	55kkvar	75kvar
Rated Capacity at 0.4kV	30kvar	50kvar	75kvar	100kvar	150kvar
Active Harmonic Filter -0.22kV/0.4kV					
Rated Capacity at 0.22kV	50A	75A	100A	150A	200A
Rated Capacity at 0.4kV	50A	75A	100A	150A	200A
Technical Specifications					
Module Size (Rack)(W*D*H)(mm)	460*483*86	540*545*190	540*545*190	540*551*219	540*595*219
Module Size (Wall)(W*D*H)(mm)	424*89*541	504*193*591	504*193*591	503*222*609	503*222*653
Net Weight	16kg	32kg	34kg	42kg	44kg
Air Flow for Heat Dissipation	4x80CFM	3x120CFM	4x120CFM	4x190CFM	4x190CFM
Rated Voltage	220V(176V-264V)/ 400V(304V-456V)				
Frequency	50Hz/ 60Hz(Range: 45Hz- 62.5Hz)				
Wiring Structure	1P2W/ 2P3W/ 3P3W/ 3P4W				
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF)				
Reactive Power Compensation	Adjustable from -1 to +1				
Unbalance Correction	100% imbalance correction				
Protection Function	Over-voltage protection, under-voltage protection, short-circuit protection, inverter bridge inverse protection, over-compensation protection and so on				
Current Transformer	50/5-8000/5				
Compensation Rate	≥97%				
Filter Performance	THDi<5%				
Noise Level	<65dB				
Response Time	50us				
Full Response Time	<10ms				
IGBT Switching Frequency	20kHz				
Topology Design	3 level topology				
Parallel Quantities	Unlimited				
Communication Port	RS485 Communication & Optional Ethernet				
Communication Protocol	Modbus Protocol & TCP/IP Protocol				
Module Display Interface	4.3" Display/7" /10" extra Display				
Mounting Type	Wall mounted/ Rack mounted/ Cabinet				
Monitoring	Independent monitoring and centralized monitoring				
Standard Compliance	EN IEC 61000; EN IEC 62477; UL 508:2024 and CSA C22.2				
Protection Class	IP 20(Can be customized)				
Operating Temperature	-10-45℃				
Relative Humidity	5% to 95% non-condensing				
Altitude	Up 2000 m. Between 2000 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m.				
Color	Black or Customized Color				

Static Var Generator - 0.48kV					
Rated Capacity	12/ 20/ 30kvar	40kvar	60kvar	80/100kvar	120kvar
Active Harmonic Filter - 0.48kV					
Rated Capacity	15A/ 25A/ 35A	50A	75A	100A/120A	150A
Technical Specifications					
Module Size (Rack)(W*D*H)(mm)	460*483*86	540*545*190	540*545*190	540*551*219	540*551*219
Module Size (Wall)(W*D*H)(mm)	424*89*541	504*193*584	504*191*584	503*222*609	503*222*609
Net Weight	16kg	32kg	34kg	42kg	42kg
Air Flow for Heat Dissipation	4x80CFM	3x120CFM	4x120CFM	4x190CFM	4x190CFM
Wiring Structure	3P3W	3P3W/3P4W	3P3W/3P4W	3P3W/3P4W	3P3W
Frequency	50Hz / 60Hz (Range: 45Hz-62.5Hz)				
Rated Voltage	480V(384V-528V)				
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF)				
Reactive Power Compensation	Adjustable from -1 to +1				
Unbalance Correction	100% imbalance correction				
Protection Function	Over-voltage protection, under-voltage protection, short-circuit protection, inverter bridge inverse protection, over-compensation protection and so on				
Current Transformer	50/5-8000/5				
Compensation Rate	≥ 97%				
Filter Performance	THDi<5%				
Noise Level	<65dB				
Response Time	50us				
Full Response Time	<10ms				
IGBT Switching Frequency	20kHz				
Topology Design	3 level topology				
Parallel Quantities	Unlimited				
Communication Port	RS485 Communication & Optional Ethernet				
Communication Protocol	Modbus Protocol & TCP/IP Protocol				
Module Display Interface	4.3" Display/7" /10" extra Display				
Mounting Type	Wall mounted/ Rack mounted/ Cabinet				
Monitoring	Independent monitoring and centralized monitoring				
Standard Compliance	EN IEC 61000; EN IEC 62477; UL 508:2024 and CSA C22.2				
Protection Class	IP 20(Can be customized)				
Operating Temperature	-10-45℃				
Relative Humidity	5% to 95% non-condensing				
Altitude	Up 2000 m. Between 2000 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m.				
Color	Black or Customized Color				

Static Var Generater - 0.69kV/0.8kV		
Rated Voltage	690V(483V-759V)	800V(560V-880V)
Rated Capacity	120kvar	138kvar
Active Harmonic Filter - 0.69kV/0.8kV		
Rated Voltage	690V(483V-759V)	800V(560V-880V)
Rated Capacity	100A	80A
Wiring Structure	3P4W/ 3P3W	3P3W
Technical Specifications		
Module Size (Rack)(W*D*H)(mm)	540*743*250	
Module Size (Wall)(W*D*H)(mm)	504*253*786	
Net Weight	64kg	
Air Flow for Heat Dissipation	4x190CFM	
Frequency	50Hz/ 60Hz (Range: 45Hz - 62.5Hz)	
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF)	
Reactive Power Compensation	Adjustable from -1 to +1	
Unbalance Correction	100% imbalance correction	
Protection Function	Over-voltage protection, under-voltage protection, short-circuit protection, inverter bridge inverse protection, over-compensation protection and so on	
Current Transformer	50/5-8000/5	
Compensation Rate	≥ 97%	
Filter Performance	THDi<5%	
Noise Level	<65dB	
Response Time	50us	
Full Response Time	<10ms	
IGBT Switching Frequency	20kHz	
Topology Design	3 level topology	
Parallel Quantities	Unlimited	
Communication Port	RS485 Communication & Optional Ethernet	
Communication Protocol	Modbus Protocol & TCP/IP Protocol	
Module Display Interface	4.3" Display/7" /10" extra Display	
Mounting Type	Wall mounted/ Rack mounted/ Cabinet	
Monitoring	Independent monitoring and centralized monitoring	
Standard Compliance	EN IEC 61000; EN IEC 62477; UL 508:2024 and CSA C22.2	
Protection Class	IP 20(Can be customized)	
Operating Temperature	-10-45℃	
Relative Humidity	5% to 95% non-condensing	
Altitude	Up 2000 m. Between 2000 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m.	
Color	Black or Customized Color	

01.
POWER QUALITY

Current Solution

SERIE A BASSO RUMORE CON VENTILATORE SILENZIOSO SVG/AHF

INTRODUZIONE

La serie di ventole silenziose utilizza ventole più silenziose rispetto ai prodotti standard, il che comporta
livelli di rumore inferiori e offre una capacità maggiore rispetto ai modelli senza ventola. Rappre-

VANTAGGI

Rumore < 50dB

Installazione facile

Technical Specifications	AHF		SVG	
Rated Capacity At 0.4kv	15/ 20/ 30A	50/ 75A	10/ 15/ 20kvar	30/ 50kvar
Rated Capacity At 0.22kv	15/ 20/ 30A	50/ 75A	5/ 7/ 10kvar	15/ 25kvar
Module Size(Wall Mounted)(W*D*H)(mm)	420*86**420	440*160*550	420*86*420	440*160*550
Net Weight	16kg	30kg	16kg	30kg
Rated Voltage	220V(176V-264V)/ 400V(304V-456V)			
Frequency	50Hz/ 60Hz(Range: 45Hz- 62.5Hz)			
Wiring Structure	3P4W/ 3P3W			
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF)			
Reactive Power Compensation	Adjustable from -1 to +1			
Unbalance Correction	100% imbalance correction			
Protection Function	Over-voltage protection,under-voltage protection, short-circuit protection, inverter bndge inverse protection,over-compensation protection and so on			
Curent Transfommer	50/5-8000/5			
Compensation Rate	≥97%			
Filter Perfommance	THDi < 5%			
Noise Level	50dB			
Response Time	50us			
Full Response Time	< 10ms			
Igbt Switching Frequency	20kHz			
Topology Design	3 level topology			
Parallel Quantities	Unlimited			
Communication Port	RS485 Communication & Optional Ethernet			
Communication Protocol	Modbus Protocol & TCP/IP Protocol			
Module Display Interface	4.3" Display/7" /10" extra Display			
Monitoring	Independent monitoring and centralized monitoring			
Standard Compliance	EN IEC 61000; EN IEC 62477; UL 508:2024 and CSA C22.2			
Protection Class	IP 20			
Operating Class	-10-45℃			
Relative Humidity	5% to 95% non-condensing			
Altitude	Up 2000 m. Between 2000 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m.			
Color	Black or Customized Color			

01.
POWER QUALITY

Current Solution

SERIE A BASSO RUMORE SENZA VENTOLA SVG/AHF

INTRODUZIONE

Rispetto ai prodotti standard, la serie AHF/SVG senza ventola elimina la ventola, utilizzando un radiatore più grande per il raffreddamento naturale, offrendo un'opzione più adatta ai clienti

ADVANTAGE

Rumore < 40dB

Installazione facile

Technical Specifications	AHF		SVG	
Rated Capacity at 0.22kV	15/ 20A	30A	5/ 7kvar	10kvar
Rated Capacity at 0.4kV	12/ 20A	30A	10/ 15kvar	20kvar
Module Size(Wall Mounted)(W*D*H)(mm)	420*150*420	440*160*550	420*150*420	440*160*550
Net Weight	17kg	30kg	17kg	30kg
Rated Voltage	220V(176V-264V)/ 400V(304V-456V)			
Frequency	50Hz/ 60Hz(Range: 45Hz- 62.5Hz)			
Wiring Structure	3P4W/ 3P3W			
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF)			
Reactive Power Compensation	Adjustable from -1 to +1			
Unbalance Correction	100% imbalance correction			
Protection Function	Over-voltage protection,under-voltage protection, short-circuit protection, inverter bndge inverse protection,over-compensation protection and so on			
Current Transformer	50/5-8000/5			
Compensation Rate	≥ 97%			
Filter Performance	THDi < 5%			
Noise Level	40dB			
Response Time	50us			
Full Response Time	< 10ms			
IGBT Switching Frequency	20kHz			
Topology Design	3 level topology			
Parallel Quantities	Unlimited			
Communication Port	RS485 Communication & Optional Ethernet			
Communication Protocol	Modbus Protocol & TCP/IP Protocol			
Module Display Interface	4.3" Display/7" /10" extra Display			
Monitoring	Independent monitoring and centralized monitoring			
Standard Compliance	EN IEC 61000; EN IEC 62477; UL 508:2024 and CSA C22.2			
Protection Class	IP 20			
Operating Class	-10 ~ 45℃			
Relative Humidity	5% to 95% non-condensing			
Altitude	Up 2000 m. Between 2000 m to 4000 m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m.			
Color	Black or Customized Color			

01.
POWER QUALITY

Current Solution

MINI SVG/AHF

INTRODUZIONE

La serie MINI è un prodotto compatto progettato appositamente per applicazioni che richiedono portata limitata. Questa serie è disponibile in due versioni: 1. Il tipo parallelo, che si connette in parallelo
al sistema e usa trasformatori di corrente per campionare la corrente di carico. 2. Il tipo in serie, integra trasformatori di corrente e interruttori all'interno del modulo. Basta collegare il modulo in serie tra la rete elettrica e il carico per completare tutto il cablaggio, offrendo una soluzione

VANTAGGI

Piccole dimensioni

Installazione facile

Technical Specifications	AHF	SVG
Rated Capacity at 0.22kV	10A	3kvar
Rated Capacity at 0.4kV	10A	5kvar
Module Size (In Parallel)(W*D*H)(mm)	260*165*415	
Module Size (In Series)(W*D*H)(mm)	260*160*616	
Net Weight	8.5kg	
Air Flow for Heat Dissipation	3x37CFM	
Rated Voltage	400V(304V-456V); 220V(176V-264V)	
Frequency	50Hz/ 60Hz(Range: 45Hz - 62.5Hz)	
Wiring Structure	3P4W(400V); 3P4W& 3P3W(220V)	
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF)	
Reactive Power Compensation	Adjustable from -1 to +1	
Unbalance Correction	100% imbalance correction	
Protection Function	Over-voltage protection, under-voltage protection, short-circuit protection, inverter bridge inverse protection, over-compensation protection and so on	
Current Transformer	X/ 20mA	
Compensation Rate	≥ 97%	
Filter Performance	THDi<5%	
Noise Level	<50dB	
Response Time	50us	
Full Response Time	<10ms	
IGBT Switching Frequency	20kHz	
Topology Design	2 level topology	
Parallel Quantities	Unlimited	
Communication Port	RS485 Communication	
Communication Protocol	Modbus Protocol	
Module Display Interface	4.3" Display/7" /10" extra Display	
Mounting Type	Wall mounted	
Monitoring	Independent monitoring and centralized monitoring	
Standard Compliance	EN IEC 61000; EN IEC 62477; UL 508:2024 and CSA C22.2	
Protection Class	IP 20	
Operating Temperature	-10-45℃	
Relative Humidity	5% to 95% non-condensing	
Altitude	Up 2000 m. Between 2000 m to 4000 m, according to GB/T3859.2,the power decreases by 1% for every additional 100 m.	
Color	Black or Customized Color	
Note	For module（In Series）, the maximum allowable load current is 50 amps.	

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01.
POWER QUALITY

Current Solution

SOLUZIONE PER ESTERNI IP55 AHF/SVG

INTRODUZIONE

I moduli della serie per esterni sono moduli indipendenti progettati specificamente per ambienti esterni. Grazie al grado di protezione IP55, sono resistenti alla polvere e all'acqua e possono essere

VANTAGGI

- Contro pioggia e neve
- Adatto ad ambienti umidi e polverosi
- Commutatore automatico incorporato
- Supporta il controllo remoto

IP55 Outdoor Static VAR Generator				
Rated Capacity at 0.22kV	15kvar	25kvar	35kvar	55kvar
Rated Capacity at 0.4kV	30kvar	50kvar	75kvar	100kvar
Rated Capacity at 0.48kV	40kvar		80kvar	100kvar
IP55 Outdoor Active Harmonic Filter				
Rated Capacity at 0.22kV	50A	75A	100A	150A
Rated Capacity at 0.4kV	50A	75A	100A	150A
Rated Capacity at 0.48kV	50A		100A	120A
Technical Specifications				
Module Size(W*D*H)(mm)	550*250*780	550*250*780	630*300*880	630*300*880
Net Weight	60kg	60kg	78kg	78kg
Air Flow for Heat Dissipation	4*120CFM	4*120CFM	5*210CFM	5*210CFM
Rated Voltage	480V(384V-528V)/ 400V(304V-456V)/ 220V(176V-264V)			
Frequency	50Hz/ 60Hz(Range: 45Hz-62.5Hz)			
Wiring Structure	3P3W/ 3P4W			
Harmonic Filtering	2nd-13th(SVG); 2nd-50th(AHF);			
Reactive Power Compensation	Adjustable from -1 to +1			
Unbalance Correction	100% imbalance correction			
Protection Function	Over-voltage protection, under-voltage protection, short-circuit protection, inverter bridge inverse protection, over-compensation protection and so on			
Current Transformer	50/5-8000/5			
Compensation Rate	≥ 97%			
Filter Performance	THDi<5%			
Noise Level	<65dB			
Response Time	50us			
Full Response Time	<10ms			
IGBT Switching Frequency	20kHz			
Topology Design	3 level topology			
Parallel Quantities	Unlimited			
Communication Port	RS485 Communication & Optional Ethernet			
Communication Protocol	Modbus Protocol & TCP/IP Protocol			
Module Display interface	7"/ 10" Display			
Mounting Type	Cabinet			
Monitoring	Independent monitoring and centralized monitoring			
Standard Compliance	IEC 61000; IEC 62477			
Protection Class	IP 55			
Operating Temperature	-10-50℃			
Relative Humidity	0% to 95% non-condensing			
Altitude	Up 2000 m. Between 2000 m to 4000 m,the power decreases by 1% for every additional 100 m.			
Color	RAL7035			
Built-in circuit breaker	Available			

01.
POWER QUALITY
Voltage Solution

CONDIZIONATORE DI TENSIONE ATTIVO (AVC)

INTRODUZIONE

AVC è una soluzione progettata per cali e sbalzi di tensione fino al 30%. AVC è collegato in serie tra il carico e la rete elettrica e ha il compito di stabilizzare la tensione a valle.

VANTAGGI

- Compensazione continua di abbassamento e innalzamento ±30%
- Monitoraggio e controllo da remoto
- Compensazione armonica
- Disponibile sia per interni che per esterni
- Compensazione reattiva
- Compensazione dello squilibrio di corrente

Technical Specifications	Single-phase system		Three-phase system			
AVC Capacity	10kVA	20kVA	30kVA	50kVA	100kVA	125kVA
Load Capacity	30-100kVA	65-200kVA	300-100kVA	170-500kVA	330-1000kVA	400-1250kVA
Voltage Regulation	30%-10%	30%-10%	30%-10%	30%-10%	30%-10%	30%-10%
Standard Size(W*D*H)(mm) (Support Customization)	550*600*700		800*800*1200			
Net Weight	100kg	120kg	400kg	600kg	800kg	1000kg
AC Voltage Range	220V±30%		400V±30%			
DC Voltage Range	380-450V		620-800V			
Output Voltage Accuracy	≤1%					
Frequency	50Hz/ 60Hz(Range: 45Hz-62.5Hz)					
Efficiency	≥98%					
IGBT Switching Frequency	20kHz					
Full Response Time	< 20ms					
Overload Protection	Maximum operating time at 110% overload: long time Maximum operating time at 120% overload: 1min Instantaneous overload capacity: 150%					
Protection Function	Over-voltage protection, under-voltage protection, short-circuit protection, inverter bndge inverse protection, over-compensation protection and so on					
Bypass Function	Dual automatic bypass:Electronic bypass and mechanical bypass					
Bypass Switching Time	Electronic bypass: ≤1ms; Mechanical bypass: ≤30ms					
Reactive Power Compensation	Adjustable from -1 to +1					
Harmonic Filtering	2nd-13th					
Unbalance Correction	100% imbalance correction					
Noise Level	<60dB					
Display Interface	7"/ 10" Display					
Communication Protocol	Modbus Protocol & TCP/ IP Protocol					
Monitoring	Independent monitoring and centralized monitoring					
Cooling Method	Forced air cooling					
Protection Class	IP 20(Can be customized)					
Operating Temperature	-10-40℃					
Relative Humidity	5% to 95% non-condensing					
Altitude	Up 2000 m. Between 2000 m to 4000m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m					

01.
POWER QUALITY

Voltage Solution

CORRETTORE DI TENSIONE DINAMICA (DVR))

INTRODUZIONE

Il correttore di tensione dinamica (DVR) commuta rapidamente l'alimentazione al carico entro 3 ms ,quando si verifica un calo di tensione nell'alimentazione di rete, proteggendo i carichi di precisione o sensibili dai disturbi dovuti al calo di tensione.

ADVANTAGE

- Alta efficienza e risposta rapida
- Semplice da usare e non richiede manutenzione
- Elevata affidabilità, design bypass
- Nessun inquinamento armonico

Technical Specifications

Rated Voltage	220V/ 400V/ 480V/ 690V				
Network structure	3P3W/3P4W				
Topology design	3 level topology				
Rated Capacity	30kVA-100kVA	200kVA	300kVA	500kVA	Customized other capacity
Standard Size(W*D*H)(mm)	800*800*2200	Two 800*800*2200	Two 1000*800*2200	Two 1 000*800*2200	Customized Size
Voltage Sag Compensation Range	0%-90%				
Response time	<3ms				
Overload Protection	Maximum operating time at 110% overload: long time Maximum operating time at 120% overload: 1min Instantaneous overload capacity: 150%				
Support Time	3s(Can be customized)				
Allowable Grid Frequency	50Hz/ 60Hz (Range: 45Hz - 62.5Hz)				
Protection Against Continuous Sags	Allowed				
Off-grid AC Voltage Control Accuracy	<1%				
Off-grid AC Voltage Imbalance	<2%				
Off-grid Output Voltage Distortion	< 3% (Can handle nonlinear loads)				
Relative Humidity	5% to 95% non-condensing				
Cooling	Forced air cooling				
Protection class	IP 20(Can be customized)				
Color	Can be customized				
Noise Level	< 65dB				
Display	10" Display				
Communication Port	RS485/ CAN				
Communication Protocol	Modbus/ CAN2.0				
Altitude	Up 2000 m. Between 2000 m to 4000m, according to GB/T3859.2, the power decreases by 1% for every additional 100 m				

Energy Storage Parameters

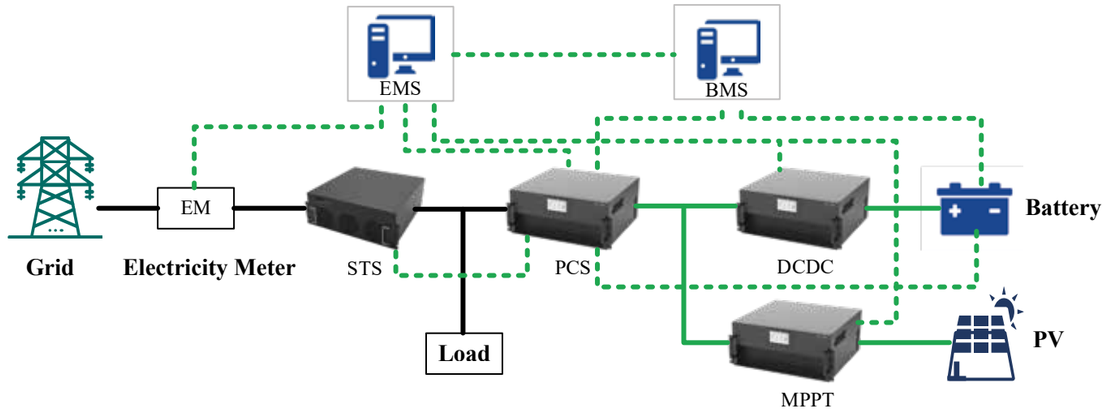
Energy Storage Component	Super Capacitor
Overload Capability	100%
Cycle Life	500000
Operating Temperature	-25℃- +45℃
Storage Temperature	-20℃- +50℃

ACCUMULO
DI ENERGIA

ESS Solution

ACCUMULO DI ENERGIA

Il sistema di accumulo di energia comprende principalmente PCS, CC/CC, batteria, MPPT, EMS, BMS e STS.



- Il sistema di conversione dell'energia completa la conversione di potenza bidirezionale CC/CA.
- Il convertitore CC bidirezionale completa l'aumento o la diminuzione della tensione sul lato di accumulo di energia.
- Il commutatore di trasferimento statico completa la commutazione rapida tra diverse fonti di alimentazione (ad esempio l'alimentazione principale e il sistema di accumulo di energia).
- Fotovoltaico CC/CC con funzione MPPT integrata.
- Il sistema di gestione dell'energia completa la pianificazione dell'ottimizzazione del sistema e la gestione dell'energia.

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ACCUMULO ENERGIA

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SISTEMA DI CONVERSIONE DELL'ENERGIA (PCS)

INTRODUZIONE

Il convertitore bidirezionale DC/DC è un dispositivo di conversione tra fotovoltaico e batteria. Il sistema di conversione dell'energia realizza la rettificazione e l'inversione tramite un convertitore trifase a tre livelli.

L'uscita rettificata viene convertita da CA trifase a CC e immessa nel sistema di accumulo di energia, mentre l'uscita invertita viene filtrata per generare CA trifase da utilizzare per carichi CA o per l'integrazione nella rete.

I principali scenari applicativi del sistema di conversione dell'energia sono lo spostamento del carico, la gestione della carica su richiesta e l'alimentazione elettrica fuori rete.

VANTAGGI

- Design modulare per funzionamento in parallelo
- Transizione on/off-grid tramite commutatore di trasferimento statico (STS)
- Efficienza massima 99%
- Diverse funzioni di protezione dai guasti
- Compatibile con il sistema trifase a tre/quattro fili
- Supporta la compensazione della potenza reattiva e la compensazione dello squilibrio trifase.

Technical Specification					
Rated Capacity	30kW	60kW	100kW	125kW	60kW (two-stage PCS)
DC Parameters					
DC Voltage Range at 0.4kV	580-950V(3P3W) 630-950V(3P4W)				48V-850V
DC Voltage Range at 0.48kV	700-950V(3P3W) 750-950V(3P4W)				48V-850V
Max. DC Current	55A	110A	171A	210A	180A
Voltage Regulation Accuracy	≤±1%				
Current Regulation Accuracy	≤±1%				
AC Parameters (On-grid)					
110%Overload Maximum Running Time	< 10min				
120%Overload Maximum Running Time	< 1min				
AC Rated Voltage	380V/ 400V(-15%~+15%)				
Max. Current	45A	90A	150A	190A	90A
AC Frequency	50Hz/ 60Hz(Range: 45Hz-62.5Hz)				
THDi	< 3%(Rated power)				
AC PF	> 0.99(Rated power)				
Power Factor Range	-1 lagging~+1 leading				
DC Component	0.5%				
Charge And Discharge Conversion Time	< 20ms				
AC Parameters (Off-grid)					
AC Voltage	380/ 400V±15%				
AC Frequency	50Hz/ 60Hz				
Output Voltage Distortion Rate	< 3%(Can handle non-linear loads)				
System Parameters					
Module Size(W*D*H)(mm)	495*420*86	440*547*219	500*479*219	500*680*200	500*600*200
Net Weight	16kg	34kg	41kg	53kg	49kg
Grid Support	LVRT/HVRT, active and reactive power control				
Efficiency	99%				
Protection Class	IP 20				
Noise Level	< 65dB				
Operation Temperature	-25℃-60℃(> 45℃ derating)				
Relative Humidity	0% to 95% non-condensing				
Cooling	Forced air cooling				
Altitude	Up 2000 m. Between 2000 m to 4000 m,the power decreases by 1% for every additional 100 m.				
Communication					
Communication port	RS485/ CAN				
Communication protocol	Modbus RTU/ CAN 2.0				

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ACCUMULO ENERGIA

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CONVERTITORE CC-CC

INTRODUZIONE

Soluzione modulare, 60 e 100 kW

Il convertitore bidirezionale DC/DC è un dispositivo di conversione tra fotovoltaico e batteria. Supporta la tecnologia Maximum Power Point Tracking (MPPT) per ottimizzare l'efficienza di generazione di energia degli impianti fotovoltaici, garantendo sempre un funzionamento vicino al punto di massima potenza (MPP). Può anche essere un dispositivo di conversione tra la batteria e il

ADVANTAGE

- Modulare e scalabile
- Batterie di supporto e ingresso fotovoltaico
- Conversione efficiente
- Diverse modalità operative

DC-DC Converter		
Rated Capacity	60kW	100kW
Technical Specifications		
HV Side Voltage	200-950V	
HV Side Current	Max. 90A	Max.150A
LV Side Voltage	48-900V Full-Power Operation Range: 340-900V DC	48-900V Full-Power Operation Range: 280V~900V DC
	$V_{HV} > V_{LV}+50V$	
LV Side Current	Max.150A	Max.360A
Efficiency	98.5%	
Voltage Stability	Static ±1%	
Current Stability	Static ±1%	
Isolation Method	Transformerless Isolation	
Module Size(W*D*H)(mm)	440*585*88	580*580*250
Weight	20kg	53kg
Cooling	Forced air cooling	
Noise	< 65dB	
Protection Level	IP 20	
MTBF	≥100,000 hours	
Operation Temperature	-20℃-60℃(>45℃ derating)	
Storage Temperature	-45℃-70℃	
Relative Humidity	0-95%RH	
Communication Port	RS485	
Communication protocol	Modbus RTU	
Altitude	Up 2000 m. Between 2000 m to 4000 m,the power decreases by 1% for every additional 100 m.	

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ENERGY STORAGE

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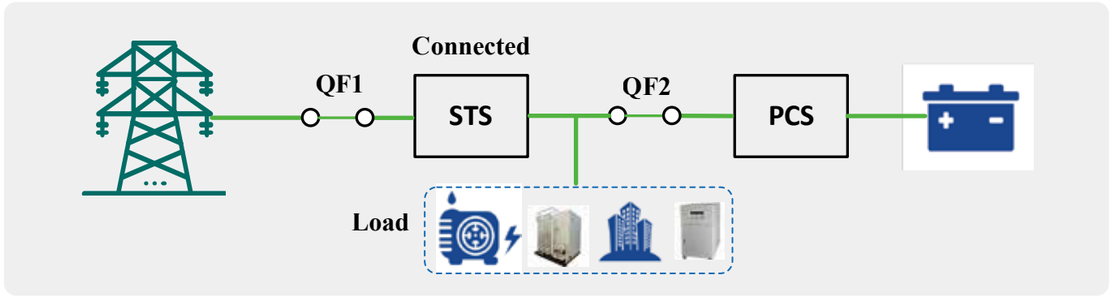
COMMUTATORE DI TRASFERIMENTO STATICO (STS)

INTRODUZIONE

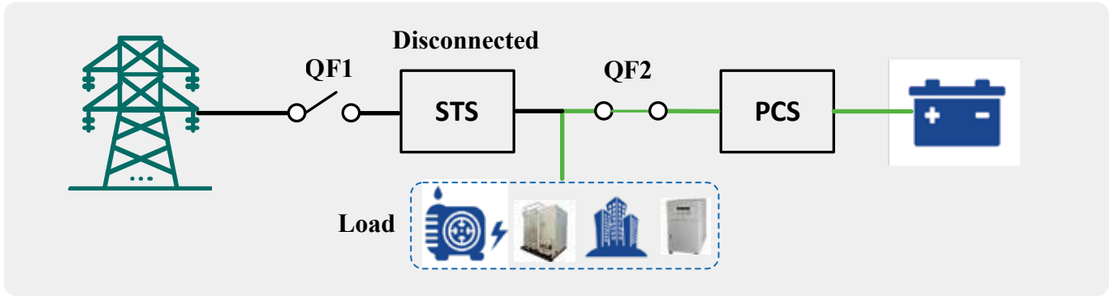
La risposta a livello di millisecondi, il tempo di commutazione on-grid e off-grid può essere entro 3 ms e la forma d'onda della tensione è continua durante il processo di commutazione, il che può evitare

ADVANTAGE

- Capacità di commutazione ultra veloce
- Design altamente affidabile
- IGestione intelligente dell'energia
- Adattabile ad ambienti di alimentazione complessi



Schematic diagram of on-grid operation of energy storage system



Schematic diagram of the off-grid independent power supply operation of the energy storage system

Static Transfer Switch			
Rated Capacity	50kW	200kW	500kW
Technical Specifications			
Rated voltage	400V(±15%)		
Frequency	50Hz/ 60Hz		
Power Supply	24V DC		
Control Voltage	12V DC		
Control Current	≤10mA		
Switching	SCR		
On to off-grid switching time	<10ms		
Off to on-grid switching time	<10ms		
Efficiency	99%		
Module Size(W*D*H)(mm)	500*522*190		
Protection level	IP 20		
Operation Temperature	-25℃-65℃		
Relative humidity	20%-70%RH		
Altitude	Up 2000 m. Between 2000 m to 4000 m,the power decreases by 1% for every additional 100 m.		